

TIMBER SALE APPRAISAL SUMMARY

Owl Creek Timber Sale

Medicine Bow – Routt National Forests &
Thunder Basin National Grassland

Parks Ranger District

Prepared By:

Mark Weyhall

Date:

8/18/14

Reviewed By:

Mark Weyhall

Date:

8/18/14

Certification

I hereby certify that the requirements of the Secretary's Regulation 36 CFR 223.30 have been met by this timber sale and that this sale has been designed and cruised by the procedures and standards in the Timber Cruising Handbook (FSH 2409.12). Records of the cruise and check-cruise are on file at the district office.

Approved By:

J. D. Berg

Date:

8/18/14

Table of Contents

	Page
I. Sale information	1
II. Unit Descriptions	5
III. Appraisal Points	6
IV. Roads	7
V. Timber Volume Determination	9
VI. Volume and Appraisal Adjustments	9
VII. Trust Funds	12
VIII. Purchaser obligation per fire	12
IX. Summary Table	13

I – Sale Information

NEPA Document(s):

Owl Mtn North Type: EA Signed By: Michael Wright Date: 9/11/2008

Road Side Hazard Tree Type: EA Signed By: Mary Peterson Date: 8/12/2008

Silviculture Prescriptions:

Prepared and Approved by: Mark Westfahl Date: 9/15/2008

Description of Sale:

Sale Name: Owl Creek

STARS Number (called Sale Number in Gate 3): 20402

Sale Number: 004

FY: 14

Location:

State: CO

County: Jackson

Legal Description Short (Include all sections within the Sale Area Boundary):

T6N R78W/T6N R77W

Legal Description Long (Include all sections within the Sale Area Boundary):

T6N R78W sections: 11, 12, 13, 24/T6N R77W sections: 5, 6, 7, 17, 18, 19, 20, 6th Principle Meridian. Jackson County, CO.

Access from Walden is via Colorado State Highway 14 east to Jackson County road 25, south to Jackson County road 27, west to BLM Road 2506 then south to the junction with BLM 2502. BLM 2502 leads to NFSR 792.1 and BLM 2506 leads to NFSR's 774.1 & 775.1

Gross Sale Acres (Sale Area Boundary): 2,958.01 acres

Harvest Acres: 676.52 acres

Sale QMD (from CS1 or CP1 cruise report): 9.1"

Ground Base Volume per/acre = $20819/676.52 = 31$ ccf

Ground Base Volume per/tree (from CP1) = $2081925/235990 = 8.8$ cf

Sale Size Class(selection list in TEA): 7

Contracting Authority: Supervisor

SBA Set Aside (Yes or No): No

Contract Form: 6

Planned Termination Date: 09/30/2018

Base Index: March, 2014

Appraisal Data Bulletin used: BU210414

Appraisal base period: 6-14

Sale Objective Code:

Purpose: TC

Activity:01

Purpose:	Activity:
TC = Timber Commodity	If TC then = 01
FS = Forest Stewardship	If FS then =
PP = Personal Use	10 = Forest & Ecosystem Health
	20 = Rec, Visuals, & Cultural Enhancement
	30 = Wildlife Habitat Mgt.
	40 = Fish habitat Mgt/H2O Improvement
	50 = T & E Habitat Mgt.
	60 = Range Enhancement
	70 = Non Timber Production
	90 = Other

Salvage Status:2

1 = Regular sale with or without a salvage component
2 = Salvage sale within the regular program
3 = Salvage sale financed by the Salvage Sale Fund (SSF)
4 = SSTS qualified sale

Gate Scheduling:

Gate	Planned Date	Actual Date
1 – Position Statement	09/18/2008	10/16/2008
2 – Decision	09/18/2008	09/11/2008
3 – Sale Prep	04/17/2014	04/17/2014
4 – Advertise	05/05/2014	
5 – Bid Opening	06/01/2014	
6 - Award	07/01/2014	

II – Unit Descriptions

<u>Unit Number</u>	<u>Harvest Acres</u>	<u>Mgt. Area</u>	<u>Suitability Code*</u>	<u>FACTS Harvest Code*</u>	<u>Silviculture Rx</u>	<u>Logging Method*</u>
1	24.53	5.13	500	4231	Salvage	421
2	35.61	5.13	500	4231	Salvage	421
3	6.92	5.13	500	4231	Salvage	421
4	44.85	5.13	500	4231	Salvage	421
5	61.96	5.13	500	4231	Salvage	421
6	33.43	5.13	500	4231	Salvage	421
7	42.77	5.13	500	4231	Salvage	421
8	7.70	5.13	500	4231	Salvage	421
9	11.58	5.13	500	4231	Salvage	421
10	37.18	5.13	500	4231	Salvage	421
11	34.02	5.13	500	4231	Salvage	421
12	20.45	5.13	500	4231	Salvage	421
13	17.50	5.13	500	4231	Salvage	421
14	20.56	5.13	500	4231	Salvage	421
15	24.72	5.13	500	4231	Salvage	421
70	30.35	5.13	500	4231	O/R	421
71	0.45	5.13	500	1160	Roadside	421
72	18.74	5.13	500	4231	O/R	421
73	2.64	5.13	500	1160	Roadside	421
74	12.18	5.13	500	4231	O/R	421
75	5.36	5.13	500	4231	Salvage	421
76	21.24	5.13	500	4231	Salvage	421
78	28.99	5.13	500	4231	Salvage	421
80	35.20	5.13	500	4231	Salvage	421
81	14.13	5.13	500	4231	Salvage	421
82	6.56	5.13	500	4231	Salvage	421
83	33.10	5.13	500	4231	Salvage	421
84	17.08	5.13	500	4231	Salvage	421
85	11.17	5.13	500	4231	Salvage	421
86	12.18	5.13	500	4231	Salvage	421
87	3.37	5.13	500	4231	Salvage	421
Total	676.52					

*See next page for code descriptions

Applicable Coding Structure For Area Description

(Timber Land Suitability Class (TLSC, TMIS Handbook)

500 - Suitable, Timber	640 - Visual Emphasis
600 - Suitable, Other Emphasis	650 - Wildlife Emphasis
630 - Recreation Emphasis	660 - Water Emphasis

FACTS - Harvest Method Codes

4111 - Patch Clearcut	4143 - Overstory Removal
4112 - Strip Clearcut	4151 - Individual Tree Selection
4113 - Stand Clearcut	4152 - Group Selection
4121 - Shelterwood Prep Cut	4220 - Thinning
4194 - Shelterwood Seed Cut	4231 - Sanitation/Salvage
4141 - Shelterwood Removal Cut	4270 - Permanent Clearing
4240 - Special	4117 - Stand Clearcut with Reserves
4147 - Overstory Removal with Reserves	1160 - Thinning for Haz. fuels

Logging Method

410 - Animal (Horse)	420 - Tractor
421 - Rubber Tired Skidder	454 - Other
480 - Helicopter	496 - Feller Buncher

Designation	Acres	Units
DxLP 9"	250.30	2, 3, 4, 6, 12, 13, 15, 80, 84, 85, 87
DxLP 7"	364.95	1,5, 7, 8, 9, 10, 11, 14, 71, 73, 75, 76, 78, 81, 82, 83, 86
DxLP 9", ESD 9"	61.27	70, 72, 74

III - Appraisal Points

Product:	Appraisal Point	One-Way Haul Miles	Round trip Minutes (RTM)
Sawtimber	Saratoga, WY	73	321
POL	Granby, CO	47	234

Confirmation of appraisal points with Forest Timber Staff and Contracting Officer.:

Who: Mark Westfahl, Forest Timber Staff, Rob Tomzcak, Contracting Officer
Date: 3/22/14

Two appraisal points were selected due to the two products of sawtimber and POL. Due to the overall size of the sale the most advantageous appraisal point for sawtimber was the mill facility in Saratoga, Wyoming and for POL the mill facility in Granby, Colorado. The Saratoga facility was chosen over mills in

Encampment, Wyoming, and Parshall and Montrose, Colorado because of the large size of the sale and Granby and Saratoga had the capability and shortest haul distance. The Walden mill facility was not chosen because it does not accept logs but only accepts chips. As per FSH 2409.18-45.11 & FSH 2409.22-06.3 the appraisal point chosen is the most advantageous from a transportation standpoint and also meets consideration of other described factors as compared to alternative locations.

IV – Roads

Haul Cost - SAWTIMBER (from haul & road maintenance spreadsheet): \$36.27 p/ccf

Haul Cost - POL (miles from haul & road maintenance spreadsheet and calculated per appraisal bulletin direction): \$-4.08 p/ccf

$$(47 \text{ miles} - 52 = -5 * \$0.17 = \$-0.85\text{p/ccf})$$

Road Package (Yes or No): YES

Miles of Construction: .15

Miles of Reconstruction: 3.81

Miles of Temporary Roads: 5.8

Specified Road Costs: \$49,375.15

Specified Road Costs per CCF: $\$49,375.15 / 20819.25\text{ccf} = \2.37p/ccf

Engineering Deposit: \$5,375

Total Cost: \$54,750.15 $\$54,750.15 / 20819.25\text{ccf} = \2.63p/ccf

Road Maintenance (from haul & road maintenance spreadsheet):

Purchaser Blade Maintenance:

POL & ST = $(\text{POL } 1.02 * 8923.33) + (\text{ST } 1.91 * 11895.92) = 31823.01 / 20819.25 = \1.53p/ccf

Dust Abatement:

None

Surface Rock Replacement:

POL & ST = 1.18p/ccf

Maintenance Deposits:

None

Snow Plowing:

Not expected to be needed during normal operations season

Prehaul Maintenance: (see pre-haul maintenance appraisal)

$\$18620.32 / 20819.25 = \0.89p/ccf

The cost estimate for the quantity of 10 cubic yards for T-801, and T-804 is \$336.00. This dollar amount equates to \$0.01/ ccf, and will be added to road maintenance costs.

Totals:

Purchaser Blade Maintenance:	\$1.53 p/ccf
Dust Abatement:	\$0.00 p/ccf
Surface Rock Replacement:	\$1.18 p/ccf
Maintenance Deposit:	\$0.00 p/ccf
Snow Plowing:	\$0.00 p/ccf
Prehaul Maintenance:	\$0.89 p/ccf
T-801 & T-804 cost	\$0.01p/ccf
Total:	\$3.61 p/ccf

Temporary road costs:

An estimated 5.8 miles of new temporary road is needed to access this sale. The Purchaser will close all miles of temporary road by re-contouring to natural topography. In places where the natural topography is flat or level and no cut or fill slopes exist the roadway will be ripped, slashed and seeded. Costs for this work are calculated using the temp road cost calculation spreadsheet that will be attached at the end of this report. Temporary road costs are calculated from the Cost Estimating Guide for Road Construction, March 2013.

Unless otherwise agreed to by both the Forest Service and the Purchaser, R.O.W. slash from temporary roads will be treated as follows: R.O.W. timber not meeting utilization standards, stumps, limbs and tops shall be scattered outside the clearing limits and lopped and scattered to lie within 24 inches of the ground. Windrowing is acceptable, so it can be pulled back onto the roadway as part of closure.

Temporary Road Cost Calculation Spreadsheet Narrative

The top portion of the sheet lists all temporary road segments. These segments are broken down into the length in feet by cross slope. The upper right portion of the sheet depicts the dollar amount for each work item by road. Clearing and grubbing cost are calculated in the boxes with the blue heading. Excavation cost are calculated in boxes with the orange heading, closure in red seeding in green and temporary gates in yellow.

1 Clearing and Grubbing: The costs per unit are calculated using an excavator, 2 sawyers, and one crew rig. The amount of clearing was broken into three CCF per acre ranges. The estimated CCF per acre of clearing was determined to be approximately 11 CCF due to the large amount of POL in the stands. At 11 CCF per acre the clearing work would take about 11 hours to complete. The cost of \$1955.15 per acre will be expanded by acreage determined by cross slope. A portion of the clearing is determined to be merchantable and the cost to yard this material was removed from the total cost of clearing. The total cost of clearing and grubbing is **\$4,933.47**.

2 Excavation: The cost per unit is calculated using a D6 dozer capable of moving 80 cubic yards per hour. The cost per cubic yard is \$1.80. This amount is expanded by an average cubic yard per cross slope. The total cost of excavation is **\$10,949.60**.

3 Closure: Closure cost were determined using a D6 and excavator working together to re-contour a road back to natural topography. The cost per hour remains static, but the production rate changes by cross slope. The calculated hourly rate is \$249.37. The total cost of closure is **\$14,395.30**.

4 Seeding: Seeding cost were determined using 21 pounds of seed per acre, one laborer, and a pickup, at a production rate of one acre per 1.5 hours. The seed cost were determined to average \$8 per pound. The calculated cost per acre for seeding is \$233.74. This cost is expanded by acres per cross slope. The total cost of seeding is **\$2,307.45**.

Subtotal:

1. \$4,933.47
2. \$10,949.60
3. \$14,395.30
4. \$2,307.45

Subtotal **\$32,585.82**

Erosion Control per C6.601# is \$2383.36 (see page 11 #8)

Temporary road closure signs per C6.312# is \$1,830.00 (see page 11 #9)

Mobilization: Mobilization is 9% of total work.

Total after mobilization: $\$36,799.18 \times 1.09 = \mathbf{\$40,111.11}$

$\$40,111.11 / 20819.25 = \mathbf{\$1.93/CCF}$

V – Timber Volume Determination

Month/Year cruise was completed: October, 2010

Final cruise processing date: July 07, 2014

Processed by: Mark Westfahl

Total sale error: 13.83%

Per FSH 2409.12 chapter 41.1, the maximum sampling error allowed for this sale is: 20%

Strata 1 error: 19.01%

Strata 2 error: 22.91%

Strata 3 error: 18.69%

Per FSH 2409.12 chapter 41.1, the maximum strata sampling error allowed for this sale is: 50%

Check cruise completed by: Christie Schneider

Date: 2/5/11

VI – Volume and Appraisal Adjustments

Describe in detail all volume & appraisal adjustments:

1. The following estimates for unseen defect and normal felling and bucking breakage will be applied uniformly in the processed cruise in all units.

LP & ES	5%
TF	7%
LPD	10%
ESD	10%
LPR	7%
ESR	5%

2. Adjustment for Property Value: n/a
3. Adjustment for deterioration of decked material: n/a
4. Adjustment for deteriorating timber due to bark beetle infestation will be made at the time of the appraisal, based on the final percentage of dead and LPR & ESR. Based on direction from the RO letter dated August 11, 2004, file code 2420/2440/2430. See Adjustment Spreadsheet calculations in the sale folder for details.
 - Unusual adjustment for LP: -\$13.15
 - Unusual adjustment for SP: -\$14.45
 - Haul adjustment for LP: -\$9.95
 - Haul Adjustment for SP: -\$31.64
5. Adjustment for mobilization: n/a
6. Adjustment for sorting: 43% (8923.33/20819.25) of the sale volume is POL material with required removal. An unusual adjustment for the cost of separating (sorting) the ST & POL products for hauling is included in this appraisal. ST is appraised to Saratoga and POL to Walden. Sorting is not required within the contract but an adjustment is being applied due to different appraisal points. The loading cost for sawlogs in the Central Rocky Mountains is \$5.43 p/ccf per R2 Amendment 2409.22-95-3 CH 40, page 2. Based on direction in the appraisal handbook R2 Amendment 2409.22-96-5, page 17; a sorting adjustment of 150% is being applied. Approximately 90% of the landings will require sorting.
 - $\$5.43\text{p/ccf} * 1.50\% (\text{adjustment}) * .90 = \-7.33 p/ccf for all species and products

This sorting adjustment is added to the unusual adjustment noted above for the following total unusual adjustments:

- $\text{LP ST} = \$-13.15 + -7.33 = \-20.48
 - $\text{SP ST} = \$-14.45 + -7.33 = \-21.78
 - $\text{LP POL} = \$-7.33$
7. Quality adjustment for haul distance

Per new Bulletin BU210414, Zone 1 haul distance adjustment per species is entered as a quality adjustment; $(\text{Base Haul Cost} - \text{Sale Haul Cost}) \times 0.5 = \text{haul adjustment by species}$. See adjustment spreadsheet.

Quality adjustment for LP: -9.95
Quality adjustment for SP: -31.64

8. Adjustment for erosion control

NFSR's 774.1 and 775.1 require scarification and seeding per C6.601#. These roads total 4.1 miles. The estimated cost to scarify a mile of road is \$182.24. The estimated cost of grass seeding w/o fertilizer per acre, labor included is \$233.74. The cost for this work will be added to temporary roads.

D5 Dozer operator (\$19.52/hr) and equipment (\$71.60/hr) cost is \$91.12/hr

Production rate is 2 hours/mile or $\$182.24/\text{mile} \times 4.1 \text{ miles}$ is \$747.18

Assuming an average road width of 14 ft, road acres would = 7.0 acres.

Seeding cost is $7.0 \text{ acres} \times \$233.74 = \$1,636.18$

$\$1,636.18 + \$747.18 = \$2383.36$

9. Adjustment for temporary road closure signs

Two sets of temporary signs are required for temporary road closures when logging operations are occurring adjacent to road 792.1 per C6.312#. The cost for this item will be added to temporary roads.

3ft x 3ft roll up sign with stand \$445.00

Road closed sign for barricade \$120.00

Class III Barricade \$350.00

Cost for the signs is \$1830.00

VII – Trust Funds

Appraisal Value = \$142,977

Required to NNF = $20819 \times .25 = \$5,205$

KV plan should be developed in FACTS

KV required reforestation: $\$24,386 (17,800 \times 1.37\%)$

KV total plan amount: \$133,691

SSF plans should be developed in TIM

SSF total plan amount: \$4,081 ($\$142,977 - \$5,205 - \$133,691 = \$4,081$)

VIII - PURCHASER OBLIGATION PER OPERATION FIRE

1. The normal amount of men required for operation of the sale = 3 men.
2. Maximum amount of purchaser obligation per operations fire = number of men x semiskilled firefighter wage rate x 12 hrs. x 3 days.
3. 3 men x 12 hr. shift x \$11.32/hr. (AD-2 firefighter, Interagency Incident Business Management Handbook) x 3 days = \$1,222.56 rounded to nearest \$100 = \$1,200.00
4. Use **\$1,200.00**

Bid Guarantee

The bid guarantee is 10 percent of the total sale value at Advertised Rates rounded up to the next \$100.

The total value of the sale is $\$142,977 \times 10\% = \$14,297.70$

Bid Guarantee is: \$14,300.00

Performance Bond

The Performance Bond is 10 percent of the total sale value at Advertised Rates rounded up to the next \$1,000.00.

The total sale value is $\$142,977 \times 10\% = \$14,297.70$ rounded to $\$15,000.00$

IX - Summary Table

Information for input to TEA234				
STARS #	State	County	Gross Acres	Harvest Acres
20402	CO	Jackson	2958	676.52
Legal Description		Construction Miles		Reconstruction Miles
T6N R77W, T6N R78W		0.15		3.81
Specified Road Cost		Contributing Funds		Sale QMD
\$54,750.15		\$0.00		9.1
Appraisal Base Period		Planned KV		Essential KV
6-14		\$133,691		\$24,386
Appraisal Point		Haul Miles		Round Trip
Sawtimber Saratoga, WY		73		321
POL Walden, CO		47		234
Haul Cost	Road Maintenance	Sale Slash		Sale Temp Road
Sawtimber \$36.27, POL \$-0.85	\$3.61	\$0		\$1.93
Ground Based Volume CCF	Ground Based Vol/acre CCF	Ground Based Vol/tree CF	Ground Based Skid Dist Feet	
20819.25	31	8	326	
Unit of Measure (UOM)	Product		Timber Property	
03 (CCF)	01 (Sawtimber) 09 (POL)		\$0.00	

All volumes are to be rounded to whole numbers because TEA will not except a decimal point.

